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8 UNITED STATES DISTRICT COURT  
9 WESTERN DISTRICT OF WASHINGTON  
AT SEATTLE

10 RING & PINION SERVICE INC.,

11 Plaintiff,

12 v.

13 ARB CORPORATION LTD.,

14 Defendants.

CASE NO. C09-586 RSM

ORDER ON CROSS-MOTIONS FOR  
SUMMARY JUDGMENT

15  
16 **I. INTRODUCTION**

17 This patent infringement action is before the Court upon the parties' cross-motions for  
18 summary judgment. Dkt. ## 41, 44. For the reasons set forth below, Ring & Pinion Service Inc.'s  
19 motion is GRANTED (Dkt. # 44) and ARB Corp. Ltd.'s motion (Dkt. # 41) is DENIED.

20 **II. DISCUSSION**

21 **A. Background**

22 Plaintiff Randy's Ring and Pinion, Inc. ("RR&P") initially filed a patent infringement  
23 action seeking a declaratory judgment of non-infringement against Defendant ARB Corporation  
24

1 Ltd. (“ARB”). ARB counterclaimed, alleging RR&P infringed its United States Patent No.  
2 5,591,098 (“the ‘098 patent”), titled “Locking Differential.” On February 18, 2011, the court  
3 issued an Order on Claim Construction, construing the disputed terms “actuator” and “cylinder  
4 means” (Dkt. #31). The parties stipulated that RR&P’s product, under the claim language  
5 defined by the court, infringed the ‘098 patent.

6 RR&P designed a second product in an attempt to design around the claims of the ‘098  
7 patent. ARB brings this motion for summary judgment on the basis of both literal infringement  
8 and infringement under the doctrine of equivalents. RR&P brings a cross-motion for summary  
9 judgment arguing that its current product does not literally infringe the ‘098 patent, nor does it  
10 infringe under the doctrine of equivalents because the RR&P design was a foreseeable  
11 configuration at the time ARB drafted the claim language. In the January 10, 2012 Stipulation  
12 and Order to Strike Trial Date and Pretrial Deadlines, the court memorialized the parties’  
13 assertion that all pending issues could be decided as a matter of law solely on the basis of their  
14 cross-motions for summary judgment. Dkt. # 52.

15 1. The Locking Differentials

16 The patent at issue is for a “differential” with specific properties. Generally, a differential is  
17 part of a vehicle that takes the rotation from the drive shaft and transfers it into the drive wheels.  
18 The name, differential, is so termed because it allows the wheels to move at different speeds  
19 relative to each other. It is often desirable for wheels to move at variable rates of speed; when a  
20 car is turning to the right, the outer (left) wheel needs to move faster than the inner (right) wheel  
21 because it has more ground to cover. Under certain conditions, however, a variable rate of spin  
22 is undesirable. For instance, in slippery road conditions, a differential will distribute some of the  
23 engine’s torque to the wheel with the least traction, causing the wheel to spin out without moving  
24

1 the vehicle.<sup>1</sup> Locking differentials were designed to lock the drive wheels so that the wheels  
 2 would spin at the same rate, ensuring that both wheels grip the road to move the vehicle forward.  
 3 The locking mechanism remains off in the default position, but the driver may turn a switch to  
 4 activate it when necessary.

5 The differential has a number of gears with interlocking teeth. The drive shaft extends  
 6 from the engine to the differential and terminates in a pinion gear with beveled teeth. The  
 7 beveled teeth of the pinion gear mesh with the teeth of a ring gear that is attached to a carrier.  
 8 Within the carrier are two opposing bevel gears. A second pinion gear sits horizontally between  
 9 the two bevel gears to connect them. The bevel gears interlock with the pinion gear such that  
 10 when you spin the bevel gear on one side it spins the pinion gear, which then spins the opposing  
 11 bevel gear in the opposite direction. The car's axles run through the bevel gears and extend out  
 12 to the two drive wheels. Therefore, the rate of rotation of one bevel gear determines the rate of  
 13 rotation of its connected drive wheel.

14 The locking mechanism sits adjacent to one of the bevel gears. The mechanism comprises  
 15 a cylindrical casing that encloses the piston portion of the actuator.<sup>2</sup> The piston forms a seal with  
 16 the casing on one end, and rests on a spring on the other. The actuator has a protruding metal

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17  
 18 <sup>1</sup> See, e.g., *My Cousin Vinny*, IMDb *My Cousin Vinny* (1992), <http://www.imdb.com/title/tt0104952/quotes> (last visited Sept. 13, 2012)

19 **Mona Lisa Vito:** The car that made these two, equal-length tire marks had positraction.  
 20 You can't make those marks without positraction, which was not available on the '64  
 Buick Skylark!

**Vinny Gambini:** And why not? What is positraction?

21 **Mona Lisa Vito:** It's a limited slip differential which distributes power equally to both  
 22 the right and left tires. *The '64 Skylark had a regular differential, which, anyone who's  
 been stuck in the mud in Alabama knows, you step on the gas, one tire spins, the other  
 tire does nothing.*

[the jury members nod, with murmurs of "yes," "that's right," etc.]

23 *Id.* (emphasis added).

24 <sup>2</sup> According to the court's prior claim construction order, ARB's actuator comprises a piston portion and a locking ring. It does not include the cylinder, the pipe that delivers the compressed air, or the spring. See Dkt. #31.

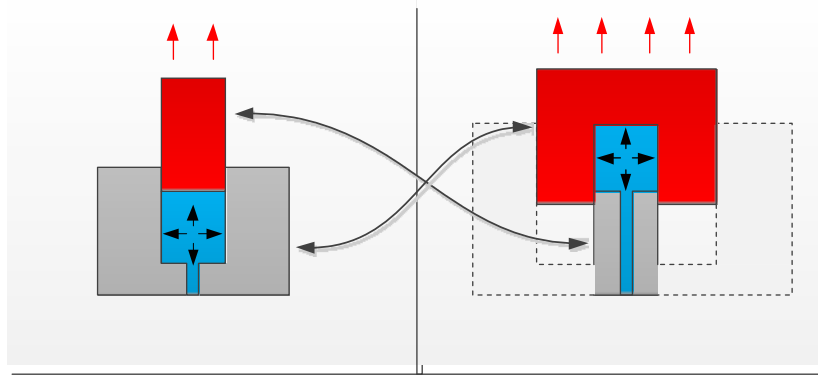
1 tooth, the locking ring, that interlocks with the teeth of the bevel gear. Both the gears and the  
2 locking mechanism are contained within the carrier. When in drive, the drive shaft transfers  
3 engine torque to the carrier. This causes the carrier to rotate and spin the gears. The locked or  
4 unlocked status of the locking mechanism affects only whether the bevel gears—and therefore  
5 the drive wheels—rotate at variable rates.

6 When the locking mechanism is deactivated, the spring under the piston is fully extended  
7 and pushes the piston to the edge of its encasing, preventing the locking tooth from hooking the  
8 bevel gear. When the locking switch is activated by the driver, compressed air is injected into  
9 the casing, which pushes the piston back against the spring. The locking tooth attached to the  
10 piston gets pushed into a place where it can hook the bevel gear. Once the locking tooth  
11 interlocks with the teeth of the bevel gear, the bevel gear can no longer spin at a different rate  
12 than the carrier. Because the three gears are connected, the locking mechanism forces both bevel  
13 gears to rotate at the same rate.

14 ARB did not invent the differential, nor did it invent the locking differential. Locking  
15 differentials are often sold as after-market accessories and ARB's '098 patent claimed an  
16 improvement over previous locking differentials; it positioned the components that switch the  
17 differential from locked to unlocked on one side of the differential, making it easier to replace a  
18 smaller differential with a locking one (Dkt. #41, pp. 4-5). The '098 patent was filed on February  
19 9, 1995, and issued on January 7, 1997.

20 In RR&P's current motion for summary judgment, it contends that its re-designed  
21 locking differential does not infringe the '098 patent because it re-configured the cylinder that  
22 drives the locking mechanism to design around ARB's claimed configuration. In essence, RR&P  
23 flipped the orientation of the cylinder. As the parties do not dispute the characterization of the  
24

accused cylinder as inverted, the court reproduces a figure from ARB's brief for illustrative purposes only. Figure 1 captures the difference in orientation of the ARB cylinder on the left and the RR&P cylinder on the right. In ARB's differential, the cylinder comprises a chamber carved into the differential carrier, which houses a moveable ram (the piston portion of the actuator). In RR&P's differential, the cylinder comprises a chamber carved into the locking ring, which houses a fixed ram portion of the differential carrier.



**Figure 1 – ARB Cylinder (left) and RR&P Cylinder (right)**

## 2. Disputed Claim Construction

Whether RR&P's cylinder configuration infringes the ARB patent depends on how the term "formed in" is construed in the '098 patent, and whether the Court's prior Order on claim construction included the language "formed in." Although ARB contends that RR&P's differential infringes claims 1-3, 5-8, and 11-14 of the '098 patent, the parties agree that the operative language at issue can be construed from claim 1 alone. Claim 1 of the '098 patent states in relevant part:

*A locking differential comprising*

...

1        *cylinder means **formed in** said differential carrier and housing an actuator*  
 2 (Dkt. # 44, p. 12). RR&P argues that the term “formed in” confines the ‘098 patent to a  
 3 cylindrical chamber carved into the differential carrier. RR&P’s chamber is not carved into the  
 4 differential carrier, but rather it is carved into the locking ring. ARB contends that the “formed  
 5 in” term encompasses RR&P’s design. The parties also dispute whether the Court construed the  
 6 term “formed in” when it issued its prior claim construction order. After reviewing all of the  
 7 parties’ motions and the Court’s prior order, the Court does not agree with ARB that the Court’s  
 8 construction of “cylinder means” extended to the “formed in” term now in dispute. The Court’s  
 9 prior Order construed “the claim element ‘cylinder means.’” Dkt. # 31, p. 12. The Court noted  
 10 that “[t]he term is first used in claim 1, describing a ‘cylinder means formed in said differential  
 11 carrier and housing an actuator [.]’” *Id.* The Court cited the additional claim language to explain  
 12 the portion of the claim where the “cylinder means” term appeared for context only. The Court  
 13 then construed “*the term ‘cylinder means’* as a chamber shaped to mate with a piston portion of  
 14 the actuator and allow for axial sliding of the piston.” *Id.* at 14 (emphasis added). The prior  
 15 Order did not address or consider the language “formed in said differential carrier.” Therefore,  
 16 the Court must construe the term “formed in” to resolve the parties’ cross-motions for summary  
 17 judgment.

## 18 **B. Summary Judgment Standard**

19        Summary judgment is appropriate where “the movant shows that there is no genuine  
 20 dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed.  
 21 R. Civ. P. 56(a); *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247 (1986). In ruling on  
 22 summary judgment, a court does not weigh evidence to determine the truth of the matter, but  
 23 “only determine[s] whether there is a genuine issue for trial.” *Crane v. Conoco, Inc.*, 41 F.3d  
 24 547, 549 (9th Cir. 1994) (citing *Federal Deposit Ins. Corp. v. O’Melveny & Meyers*, 969 F.2d

744, 747 (9th Cir. 1992). In this case, the parties stipulate that the cross-motions for summary judgment present only issues of law for the court to resolve: (1) the meaning of the term “formed in said differential carrier,” (2) whether the RR&P design literally infringes claim 1 in the ‘098 patent, and (2) whether the design infringes under the doctrine of equivalents when the inverted cylinder configuration was a foreseeable alternative at the time ARB drafted the patent.

### III. ANALYSIS

#### A. Claim Construction

The claims of a patent define the invention to which a patentee is granted the right to exclude. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005). If claim terms are in dispute, the Court must determine the meaning and scope of the disputed terms as a matter of law. *See Markman v. Westview Instruments*, 52 F.3d 967, 976-79 (Fed. Cir. 2005). Claims terms should be given their ordinary and customary meaning as understood by a person of ordinary skill in the art. *Phillips*, 415 F.3d at 1312-13. To discern a claim term’s ordinary meaning, courts look first to the intrinsic evidence, which includes the patent claims, the specification, and the prosecution history. *Primos, Inc. v. Hunter’s Specialties, Inc.*, 451 F.3d 841, 847-48 (Fed. Cir. 2006).

Here, the term “formed in said differential carrier” requires the Court to determine whether “formed in” describes the chamber of the cylinder as being carved into the differential carrier. The term “formed” is frequently used throughout both the claims of the ‘098 patent and the specification. For example, within the specification, the language distinguishes structures that are “formed” either with the locking ring or “formed” in the differential carrier. Compare the language “the present invention comprises a locking ring **formed with** outwardly directed spline teeth,” with “an annular cylinder **formed in** the carrier casing . . . .” Dkt. # 21-2, p. 4. In the first

1 instance, the patentee communicates that the locking ring is molded to include spline teeth. In the  
 2 second, she communicates that the cylinder is molded or carved into the carrier casing. Although  
 3 the specification often provides dispositive evidence as to a claim term's meaning, courts must  
 4 refrain from importing limitations from the specification into the claims. *See SciMed Life*  
 5 *Systems, Inc. v. Advanced Cardiovascular Systems, Inc.*, 242 F.3d 1337, 1340 (Fed. Cir. 2001).

6 But here the claims use the term “formed” to describe structures with integral  
 7 components or as a limitation on the location of structures as well. Claim 1 states the following:

8 A locking differential comprising  
 9 a differential carrier **housing** a pair of bevel [g]ears and at least one pinion  
 10 gear . . .  
 11 a locking means **positioned within** said differential carrier . . .  
 12 said one of said bevel gears **being formed with** cooperating teeth . . .  
 13 cylinder means **formed in** said differential carrier and **housing** an actuator  
 14 . . .  
 15 a shaped cover plate **forming part** of said differential carrier . . .

16 Dkt. # 21-1, p. 5. (emphasis added). The term “formed” is distinguished from generic locating  
 17 terms like “positioned” or “housed.” The claim limits the location of the cylinder means to a  
 18 specific location within the carrier necessitating that the carrier be molded to include the  
 19 chamber of the cylinder means. It is reasonable to assume, in light of the consistent usage of the  
 20 term within the specification and the claims that the patentee used the term “formed in” to define  
 21 the location of the cylinder means. Accordingly, the Court finds that the term “formed in said  
 22 differential carrier” requires the cylinder means to be a chamber carved into the differential  
 23 carrier.  
 24

## 21 **B. Literal Infringement**

22 An accused product literally infringes the patent if it contains all the elements of the  
 23 patent claims. *Karlin Tech., Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 974-75 (Fed. Cir.  
 24 1999). Having construed the claim language to require that the cylindrical chamber be carved



1 into the differential carrier, RR&P's design must literally incorporate this element to support  
 2 ARB's literal infringement claim. As discussed above, the accused product inverts the ARB's  
 3 claimed cylinder so that the chamber is formed in the locking ring, not the differential carrier.  
 4 ARB contends that RR&P's cylinder satisfies the "formed in" element because in RR&P's  
 5 design, the base of the cylinder is formed by the fixed ram portion of the carrier.

6 This argument is not persuasive. The Court previously construed the term "cylinder  
 7 means" as a chamber shaped to mate with the piston portion of the actuator. It discussed the  
 8 chamber as having a cylindrical shape. Dkt. # 31, p. 14. A cylindrical shape is defined by the  
 9 curved shape of the sides, not merely its top or base. The chamber forms the curved sides that  
 10 accommodate either ARB's moveable ram or RR&P's fixed ram. It is implausible then that  
 11 RR&P's fixed ram, which can form the base of the cylinder, constitutes the chamber that it is  
 12 supposed to be housed by. The claim language states that the "cylinder means" must be "formed  
 13 in said differential carrier." Therefore, the chamber must be formed in the differential carrier.  
 14 And RR&P's chamber is formed in the locking ring, not the carrier. Accordingly, RR&P's  
 15 design does not literally infringe the claims of the '098 patent.

### 16 **C. Doctrine of Equivalents**

17 Under the doctrine of equivalents, "a product or process that does not literally infringe  
 18 upon the express terms of a patent claim may nonetheless be found to infringe if there is  
 19 "equivalence" between the elements of the accused product or process and the claimed elements  
 20 of the patented invention." *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21  
 21 (1997) (citing *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*, 339 U.S. 605, 608,  
 22 70 S. Ct. 854, 94 L.Ed. 1097 (1950)). In *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*,  
 23 535 U.S. 722 (2002), the Supreme Court emphasized the rationale supporting the doctrine:

1 [t]he language in the patent claims may not capture every nuance of the  
2 invention or describe with complete precision the range of its novelty. If  
3 patents were always interpreted by their literal terms, their value would be  
4 greatly diminished. Unimportant and insubstantial substitutes for certain  
5 elements could defeat the patent, and its value to inventors could be  
6 destroyed by simple acts of copying.

7 *Id.* at 731. The doctrine, however, creates a tension with the public notice function of patent  
8 claims. *Freedman Seating Co. v. American Seating Co.*, 420 F.3d 1350, 1358 (Fed. Cir. 2005). A  
9 patent claim defines the scope of the patent to the world. If there are a range of undefined, yet  
10 equivalent alternatives to a claimed element of the invention, a competitor is left without  
11 guidance to determine what constitutes a non-infringing alternative. *See id.* This uncertainty as to  
12 a patent's scope may serve to discourage investment in, or the creation of, an innovative  
13 alternative. *Id.*

14 Because of the risk of claim ambiguity posed by the doctrine of equivalents, there are a  
15 number of doctrinal constraints designed to limit the doctrine's application. Appropriate here is  
16 the "all limitations rule," first defined in *Warner-Jenkinson*. The rule has two parts: first,  
17 equivalence is assessed on a limitation-by-limitation basis. *Freedman*, 420 F.3d at 1358.  
18 Equivalence is not determined from the invention as a whole. *Id.* And second, the accused  
19 product is not an equivalent, as a matter of law, if such a finding would vitiate the claimed  
20 limitation. *Id.* Under a totality-of-the-circumstances framework, the court must determine  
21 whether the alleged equivalent presents only an insubstantial change. *Id.* at 1359. The change is  
22 insubstantial if it does not render the claimed limitation meaningless. *See id.*

23 In *Deere & Co. v. Bush Hog, LLC*, \_\_F.3d\_\_, 104 U.S.P.Q. 2d 1881 (Fed. Cir. Dec. 4,  
24 2012), the Federal Circuit discussed what it considers a common misperception regarding  
25 vitiation. The court cautioned against adopting a pure binary approach when performing the  
26 vitiation test. *Id.* at \* 5. Specifically, it noted that because the doctrine of equivalents

presupposes that an element of the claimed structure is missing, to point only to the absence of an element as the basis for vitiation is improper. *Id.* The court makes clear that the proper inquiry rests on “whether an asserted equivalent represents an ‘insubstantial difference’ from the claimed element, or “whether the substitute element matches the function, way, and result of the claimed element.”” *Id.* (quoting *Warner-Jenkinson*, 520 U.S. at 40). The court need not, however, engage in both inquiries if a limitation-by-limitation comparison reveals more than an insubstantial difference between the patented and accused claim element. “[I]f a theory of equivalence would entirely vitiate a particular claim element, partial or complete judgment should be rendered by the court, as there would be no further *material* issue for the jury to resolve.” *Warner-Jenkinson*, 520 U.S. at 39 n. 8 (emphasis original). Thus, if vitiation applies, a finding of equivalence is precluded as a matter of law; the court need not perform *Graver Tank’s* function-way-result test, which is a factual determination. *See U.S. Phillips Corp. v. Iwasaki Elec. Co. Ltd.*, 505 F.3d 1371, 1378-79 (Fed. Cir. 2007) (stating vitiation “is nothing more than a conclusion that the evidence is such that no reasonable jury could conclude that an element of an accused device is equivalent to an element called for in the claim”) (quotation omitted); *Nautilus Group, Inc. v. Icon Health and Fitness, Inc.*, 308 F. Supp. 2d 1217, 1219 (W.D. Wash. 2003).

The parties stipulated that the cross-motions for summary judgment present only one legal question concerning the doctrine of equivalents, which is whether the structural modification of the cylinder at the time of drafting forecloses application of the doctrine of equivalents because the modification was foreseeable. The parties stipulated that they “agree that the accused differential is an equivalent of the ‘cylinder means’ claim element” and “that the sole difference between the ‘cylinder means’ claim element and the cylinder in the accused differential would have been foreseeable to a person having ordinary skill in the art at the time

the application for the ‘098 patent was filed.” Dkt. # 51, p. 2. The parties’ briefing accordingly addressed only the issue of foreseeability as a bar to relief under the doctrine of equivalents. After further review, the Court requested supplemental briefing exercising its authority under Rule 56(f)(2). Fed. R. Civ. P. 56(f)(2) (2012). The parties were asked to address the application of the “all limitations rule” to the term “formed in.” Dkt. # 53, p. 1. The Court first addresses RR&P’s original foreseeability argument and then turns to the specific application of the all limitations rule to the “formed in” claim language.

#### 1. Foreseeability

There is no dispute that the inverted cylindrical structure in the accused device was known as a comparable or “equivalent” structure to ARB’s design at the time ARB drafted the ‘098 patent. RR&P argues that the foreseeable nature of the inverted structure prevents ARB from asserting infringement under the doctrine of equivalents because if the patentee knows that an equivalent structure exists, she is obligated to draft claims that literally encompass the alternate structure. Dkt. # 44, p. 15. ARB contends, however, that RR&P’s foreseeability limitation is relevant only in the context of prosecution history estoppel and that RR&P’s formulation of “patent drafter estoppel”<sup>3</sup> has been firmly rejected by the Federal Circuit. The Court agrees to some extent with ARB that foreseeability at the time of drafting alone, is not a formally recognized limitation on the doctrine of equivalents. *Sage Products* articulated a “foreseeability principle”<sup>4</sup> when the court discussed the need for patent drafters to negotiate broader claims to cover known equivalents at the time of drafting. *See* 126 F.3d at 1425. But notably, in *Johnson & Johnston Assoc. Inc. v. R.E. Service Co. Inc.*, 285 F.3d 1046 (Fed. Cir.

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<sup>3</sup> *See* Christopher M. Kaiser, *Patent Drafter Estoppel: Why Didn’t Sage Products Create a New Foreseeability Limitation on the Application of the Doctrine of Equivalents*, 13 J. Intell. Prop. L. 305 (2006).

<sup>4</sup> *Johnson & Johnston*, 285 F.3d at 1057 (Rader, J concurring).

2002), full discussion of this principle as a limitation to the doctrine of equivalents is relegated to a concurring opinion. *Id.* at 1057-59. Moreover, Judge Lourie by separate concurrence questioned “introducing the concept of foreseeability [as an] answer to the equivalence dilemma.” *Id.* at 1063; *see also Kraft Foods, Inc. v. International Trading Co.*, 203 F.3d 1362, 1372-73 (Fed. Cir. 2000) (rejecting argument that the accused structural component of the device did not infringe under doctrine of equivalents merely because it existed at the time of drafting and was unclaimed, and remanding case for trial on whether the accused device infringed under function-way-result test). RR&P has not provided authority that advances foreseeability alone as a recognized limitation to the doctrine of equivalents. Foreseeability is however, a factor to be considered when evaluating the totality of the circumstances for the all-limitations rule. *See Freedman*, 420 F.3d at 1362.

## 2. All-Limitations Rule

The all-limitations rule invokes the principle of vitiation. To determine whether a claim limitation would be vitiated by a finding of equivalence, “courts must consider the totality of the circumstances of each case . . . .” *Freedman*, 420 F.3d at 1359. Therefore, courts must engage in a multi-factored analysis to determine whether the accused device presents an insubstantial change that does not render the claim limitation meaningless. *Id.* The factors that may be considered include (1) the simplicity of the structure, (2) the specificity and narrowness of the claim, and (3) the foreseeability of variations at the time of filing, and (4) whether the structural change is a slight difference of degree or a substantial difference or difference in kind. *See id.* at 1360. But before the Court evaluates the relevant factors, it must first determine whether the language at issue is a limitation. *Nautilus Group*, 308 F. Supp. 2d at 1219.

ARB contends that the Court need not reach the multi-factored analysis because the term “formed in” cannot properly be construed as a separate limitation. It states that the language is a

1 “descriptive phrase [that] describes the type of connecting means that limitation (h) covers but it  
2 is not itself a separate claim limitation for purposes of the doctrine of equivalents.” Dkt. # 55, p.  
3 6. In short, ARB contends that “formed in” is but a term contained within a larger limitation.  
4 This argument is without merit. In *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d  
5 1528 (Fed. Cir. 1987), Perkin-Elmer argued that its claims for a resonator coupler should be  
6 construed as comprising only two elements. The court rejected that argument stating “a court  
7 may not, under the doctrine of equivalents, erase a plethora of meaningful structural and  
8 functional limitations of the claim on which the public is entitled to rely.” *Id.* at 1532. Although  
9 the court did not engage in an all-limitations analysis, it upheld the district court’s finding of no  
10 infringement despite Perkin-Elmer’s attempts at minimizing the importance of specific language  
11 contained within its claims. *Id.* at 1534. Here, the term “formed in” specifically locates ARB’s  
12 cylinder chamber as carved into the differential carrier. The term identifies a structural  
13 encumbrance on the location of the chamber. The language is specific in its limitation of  
14 location, and thus is a claim limitation appropriate for analysis under the all-limitations rule.

15 *a. Symplicity of the Structure*

16 Neither party disputes that the cylinder designs at issue are simple structures. As the  
17 Court discussed above, the language “a cylinder means formed in the differential carrier” can be  
18 fairly read from intrinsic sources as meaning a carved-out cylindrical chamber in the carrier. The  
19 technology is not complex and can be accurately described by plain language. The claim  
20 limitation simply identifies a location for the chamber of the cylinder. In *Sage*, the court  
21 discussed a similarly simple structural design with plainly articulated structural limitations. 126  
22 F.3d at 1424-25. There the court decided that the “over said slot” language of Sage’s patented  
23 disposal container was unambiguous and that “no subtly of language or complexity of the  
24 technology . . . obfuscated [its] significance . . .” *Id.* at 1425. The same is true here. The

1 limitation that the chamber is formed in the differential carrier unambiguously defines the  
2 location of the chamber.

3 *b. Specificity of the Claim*

4 Similarly, the language specifically and narrowly ties the location of the ARB chamber to  
5 the mold of the differential carrier. RR&P designed around this encumbrance by forming its  
6 chamber within the locking ring. “[B]y defining the claim in a way that clearly exclude[s] certain  
7 subject matter, the patent implicitly disclaim[s] the subject matter that was excluded and thereby  
8 bar[s] the patentee from asserting infringement under the doctrine of equivalents. *SciMed*, 242  
9 F.3d at 1346. ARB could have drafted broader language to include RR&P’s design by not  
10 limiting the location of the chamber within its claim. *See Freedman*, 420 F.3d at 1362 (stating  
11 that the patent drafter chose to specifically limit the claims and “members of the public were  
12 therefore justified in relying on this specific language in assessing the bounds of the claim”).

13 *c. Foreseeability of the Variation*

14 As discussed above, neither party disputes that the orientation of the cylinder was a  
15 known variation at the time that the ‘098 patent was drafted. *See Dkt. ## 45 at ¶ 5, 43-1 at pp.*  
16 *23-24.*

17 *d. Degree of Structural Change*

18 The Federal Circuit has distinguished cases where the accused element varies subtly by  
19 degree from cases where the accused alteration represents a marked difference. *Planet Bingo,*  
20 *LLC v. GameTech Intern., Inc.*, 472 F.3d 1338 (Fed. Cir. 2006) (comparing cases). When an  
21 accused device has a physical characteristic that is markedly different from the characteristic  
22 described by the claim limitation, then the doctrine of equivalents cannot apply. *See Ethicon*, 149  
23 F.3d at 1317; *Moore U.S.A., Inc. v. Standard Register Co.*, 229 F.3d 1091, 1106 (Fed. Cir.  
24 2000). For example, in *Moore*, the court found no infringement because the accused product had

1 a minority of adhesive strips when the claim limitation called for a majority. 229 F.3d at 1106. In  
2 *Sage*, the court found no infringement when the claim limitation required an elongated slot to be  
3 on top of, not on the side of the disposal container. 126 F.3d at 1425-26. Lastly, in *Freedman*, the  
4 court found no infringement where the accused slider crank mechanism was “rotatably mounted”  
5 rather than “slidably mounted” as required by the claim limitation. 420 F.3d at 1361-62.

6 Here, ARB claimed a cylinder means that requires a chamber formed in the differential  
7 carrier. ARB’s device contains a chamber formed in the carrier and a moveable ram formed with  
8 the actuator. RR&P designed around ARB’s claimed limitation by forming the cylinder within  
9 the locking ring and the fixed ram in the carrier. RR&P chose the opposite configuration for its  
10 cylinder. The opposing configuration is a difference in kind, not degree, from the “formed in”  
11 limitation imposed by the claim language.

12 The factors show that the structure is simple; that the claim language “formed in said  
13 differential carrier” specifies narrow limiting language for locating the chamber of the cylinder;  
14 that the flipped orientation of the cylinder was a known variation at the time ARB filed its  
15 patent; and that the reversed orientation is not a subtle change in degree. Therefore, a finding that  
16 RR&P’s accused cylinder design is equivalent to ARB’s cylinder design under the doctrine of  
17 equivalents would render the “formed in” limiting language meaningless. Because the Court  
18 finds that a finding of equivalency would vitiate ARB’s claimed limitation as a matter of law, it  
19 need not engage in the function-way-result analysis. Accordingly, the Court finds that RR&P’s  
20 design does not infringe under the doctrine of equivalents and GRANTS RR&P’s cross-motion  
21 for summary judgment.



**IV. CONCLUSION**

Having considered the parties' cross-motions for summary judgment, the responses and replies thereto, all of the attached declarations and exhibits, and the remainder of the record, the Court hereby finds and ORDERS:

(1) ARB's motion for summary judgment (Dkt. #41) is DENIED.

(2) RR&P's motion for summary judgment (Dkt. #44) is GRANTED.

(3) This matter is hereby dismissed with prejudice.

Dated this 1<sup>st</sup> day of February 2013.



RICARDO S. MARTINEZ  
UNITED STATES DISTRICT JUDGE